ATTACHMENT A
REMARKS

The interview held with Primary Examiner Nguyen and Supervisory Primary Examiner Black on August 10, 2006, is gratefully acknowledged. The interview centered around the rejection on prior art and the substance of the discussion at the interview is incorporated in the discussion below.

Turning first to a formal matter, in the paragraph bridging pages 5 and 6 of the Office Action the Examiner has objected to the phrase "transmitter/receiver" and has stated that if "the applicant wish to claim that each device include both the transmitter AND the receiver, the applicant must explicitly disclose this using the word 'AND' between the two elements; also the examiner requests support in the specification that specifically teached that the device 30 (fig. 1) and 32 (fig. 2) 'each' includes 'both' the transmitter and receiver."

First, it is respectfully submitted that the phrase "transmitter/receiver," similarly to "transmitter-receiver," is commonly used to denote a transceiver or transmitter and receiver device. However, in order to expedite the prosecution, the phrase "transmitter/receiver" has been changed to "transmitter and receiver" throughout the claims. On the other hand, it is believed that this change is actually unnecessary given that the claims clearly provide that the "transmitter/receiver" of both the first electronic control device and the second electronic control device both transmit and receive. In this regard, considering claim 1 as representative, the "transmitter/receiver" of the second electronic control device is recited as "receiving said characteristic signal" and "transmitting a return signal to the transmitter/receiver of the first control device in response thereto." Similarly, the "transmitter/receiver" of the first electronic control device is recited as "transmitting a characteristic signal" and as determining a distance based on the return signal, i.e., the signal from the transmitter/receiver of the second electronic control device, so that the transmitter/receiver of the first electronic control device obviously receives the return signal transmitted thereto by the transmitter/receiver of the second electronic control device. Thus, contrary to the contentions of the Examiner, the transmitting and receiving functions of the respective transmitter/receiver devices are clearly set forth in the claims and it is improper for the

Examiner to discount this feature based on a contention that the phrase "transmitter/receiver" is simply a "name."

Claims 1-5 and 15-21 have been rejected under 35 USC 103(a) as being "unpatentable over" Simon in view of Smith and further in view of Winner. These rejections are respectfully traversed although claim 1 has been amended to include the subject matter of claim 16. Because claim 1 simply incorporates the subject matter of a claim dependent thereon, no new issues are raised.

Simon discloses a passive remote access control system wherein access to a motor vehicle is controlled by periodically transmitting an interrogation system from a control circuit on the vehicle. Upon receiving the interrogation signal, a handheld remote control device transmits a reply signal to the control circuit. The control circuit "measures the strength of the reply signal and activates a first function, such as unlocking a door of the vehicle, when the strength exceeds a first threshold level and, thereafter, when the signal strength exceeds a second threshold level, the control circuit activates a second function, for example enabling the engine to be started" (see the Abstract). Generally speaking, the Simon system is basically a remote door locking and unlocking system of the type in common use (and such as has been around since as early as the 1950s) although the system does also enable the engine to be started when, as indicated above, the signal strength of the reply signal exceeds a second threshold. This enabling of engine starting is, of course, the opposite of disabling the engine when the reply signal is less than a threshold level, and, in this regard, the basic purpose or function of the Simon system are completely different from that of the present invention, wherein a key purpose is to disable a vehicle when the distance between a user-carried transmitter and the vehicle is greater than a predetermined distance.

The Examiner recognizes some of the shortcomings of Simon as a reference against the claims and, in this regard, states that Simon "does not explicitly disclose allowing the user to wear the transmitter, controlling continued operation of the vehicle, and the control unit that calculates the distance between the first and second control devices for disabling vehicle when the distance is greater than a predetermined distance." It is respectfully submitted that not only does Simon not disclose these

features but also that these are core features of the present invention which distinguish the invention from remote door control systems such as that of Simon.

Considering the latter point in more detail, it is respectfully submitted that one of ordinary skill in the art would not look to a patent which deals with controlling locking and unlocking of a vehicle for a solution to problems associated with systems for preventing "car-jacking," or other unauthorized use of a vehicle, when the vehicle is in operation. Moreover, enabling the engine of a vehicle when, e.g., the driver gets into the vehicle (so that the signal strength of the reply signal exceeds the "second threshold level" referred to above) is a much different thing from disabling a car-jacked vehicle. As indicated above, the teachings of Simon are akin to those involving simple remote car door locking and unlocking which are in common use, and are not analogous to systems for disabling the continued operation of a vehicle after the vehicle has been started and is being operated by an unauthorized user.

Further, applicant respectfully disagrees with the contention that "adapting the transmitter in a specific shape wearable to a person would have been well known and obvious matter of design choice." In this regard, the obvious form of the transmitter in Simon is that which is already in common use, i.e., a small handheld unit which is normally adapted to carry the keys for the vehicle as well. Such units are not wearable and are not adapted to be worn by a user because of the presence of the keys and because of the need to operate by hand the various associated controls ("lock," "unlock," "trunk latch" and the like), whereas, with the truly passive system of the present invention, wherein no such controls are necessary, the unit can readily be adapted to being worn on the person of the user.

As indicated above, claim 1 has been amended to include the subject matter of claim 16. Thus, claim 1 now provides that the second control device is of a size and outward appearance similar to that of a conventional pager device. The Examiner has contended that this feature "would have been both well known and obvious matter of design choice." It is respectfully submitted that such is not the case. The Winner patent, which is being relied on as disclosing the "wearable" feature merely states that the transmitter T has a clip 52 for mounting the transmitter on the person of the authorized operator. Winner, similarly to Smith, provides for the user of a single

transmitter rather than a transmitter and receiver, and given that the Examiner proposes to incorporate the teachings of Smith and Winner in a wholesale manner into the Simon system, the resultant transmitter-receiver in the hybrid combination would necessarily include all of the additional features of the Simon device common to control units such as that of the Simon patent discussed above (e.g., a key holder and buttons for "lock," "truck latch" and like functions. It would not be obvious to construct such a transmitter-receiver to have the pager appearance claimed and to be wearable as claimed..

Turning to the Smith patent, the Smith patent discloses a vehicle security apparatus and method designed to prevent "car-jacking." The apparatus includes "a transmitter carried by the driver, a receiver and switch circuit installed in the vehicle such that, when the receiver fails to receive the signal broadcast by the transmitter, the switch circuit disables the vehicle for operation" (see the Abstract). An "event detector, such as a switch circuit connected to the door light switch circuit of the vehicle, may be used to arm the disable circuit for a selected period so that disablement occurs only when the transmitter and receiver are separated beyond their communication range during a defined time interval following the occurrent [sic] of the event" (see the Abstract).

It is noted that there are a number of important differences between the present invention and the apparatus of the Smith patent. For example, Smith employs a simple transmitter and receiver and, as indicated above, provides for disabling of the vehicle when the receiver, which is installed in the vehicle, fails to detect the signal broadcast by the transmitter. This contrasts with the present invention wherein both the first electronic control device adapted to be mounted in the vehicle, and the second electronic control device adapted to be worn by authorized persons, include transmitter/receivers, in contrast to Smith wherein the driver carries the transmitter and the receiver is installed in the vehicle. Further, as indicated above, Smith provides for an event detector such as door open detector (denoted 32 of Figure 1) in arming the disabling circuit.

Further, and more generally, it is respectfully submitted that the combination of the Smith and Simon patents is necessarily the improper product of hindsight. The Examiner contends that it "would have been obvious to a person of ordinary skill in the

art at the time the invention was made to disable the vehicle taught by Simon when the distance between the user and the vehicle is larger than a predetermined distance as taught by Smith in order to prevent hi-jacking situation in which the user is pushed away from the vehicle." However, as indicated above, the references actually deal with two entirely different situations, i.e., (i) remote control of door locks and starting the engine when the driver enters the vehicle, as compared with (ii) disabling a vehicle that has already been started and is in continued operation. In this regard, the anti-theft apparatus of Smith would be a complete add-on to the existing Simon door-lock control system rather than an enhancement of the door-lock control system. Thus, while it is respectfully submitted that such a combination would not be obvious, if the references were somehow to be combined, the resultant combination would be one wherein the Smith apparatus was separately incorporated in the Simon system and thus one that would suffer the very disadvantages discussed above with respect to the Smith patent. For example, based on the Smith teachings, the system would simply use a user carried transmitter and a vehicle mounted receiver as taught by Smith. In such a system it is the failure to detect the transmitted signal that produces vehicle disablement, in contrast to the present invention wherein transceivers (transmitter/receivers) are used in both the first and second electronic control devices and wherein vehicle disablement is effected based on a returned signal, which is produced by the transceiver of the second device in response to a characteristic signal transmitted by the transceiver of the first device, and which is received by the transceiver of the first device and processed by a control circuit of the first device. Smith teaches away from using transceivers in both first and second electronic control devices because, in the Smith approach, only a single transmitter and a single receiver are used. Moreover, if the two systems were to be integrated in a wholesale manner as proposed by the Examiner, the transceiver of the second control device would be of the physical nature discussed in Simon and not as claimed (see the discussion above regarding the subject matter of claim 16).

It is noted that in the "Response to Arguments" section of the Office Action the Examiner contends that "Simon does not absolutely teaches away from disabling the engine because in col. 1, lines 17-20, Simon teaches that the remote control device can be used to arm security system" and that "it is well known that arming security system

usually includes disabling the vehicle engine when the security is deemed breached." It is respectfully submitted that the latter contention of the Examiner is utterly without any support in actual fact. The term "arming" in arming a security system simply means turning the security system on so that the system is "armed," i.e., active or ready to go. Arming a security system has nothing whatsoever to do with disabling the vehicle engine when the security is deemed breached.

Turning to claim 17, apart from the arguments set forth above with respect to the "pager" feature, claim 17 is patentable for at least the reasons advanced previously. In addition, in contrast to the present invention as claimed in claim 17 as amended, the Smith patent, like the Simon patent, does not actually "calculate the difference between the first and second control devices based on the return signal to produce a calculated distance, compare the calculated distance with a predetermined distance and disable the vehicle when the calculated distance is greater than the predetermined distance." Both the Smith and Simon systems rely on a determination of signal strength in their operation and while Smith, for example, refers to distance d' in Figure 9, the Smith patent makes it clear that what is being measured is the number of lost pulses after a selected interval (see the first full paragraph of column 12) and that there is no actual calculation of the separation distance.

In the "Response to Arguments" section, the Examiner contends that "Smith explicitly discloses calculating the separate distance between the first and the second device (Smith col. 12, lines 37-40)." The Examiner further contends that "[c]oncerning details on how the distance is calculated (based on lost pulses, etc.), the detail on how the distance is determined is irrelevant because the claims in the present application do not teach how the distance is determined either."

It is respectfully submitted that there contentions are not well taken. First, lines 37-40 of column 12 provide that the "broad method" of Smith includes several steps "the first of which is the providing of a first means carried by the operation of the vehicle and a second means carried by the vehicle with the first and second means for detecting a distance of separation between the operator and the vehicle." It is clear that "detecting a distance" in Smith involves, in one embodiment described in column 11, generating an out of range signal based on sensing the presence or absence of voltage pulses. So

long as the pulses are present no alarm signal is generated. In another embodiment, shown in Figure 9, a simplified arrangement is provided "wherein failure of receiver 512 to receive signal S' after a selected interval, such as a series of counted lost pulses, causes a disabled relay to act directly." Although the signal strength S is related to a distance d', this approach is based solely on signal strength and there is clearly no calculation of a distance and comparing that distance with a stored distance as provided for in claim 17. The calculation step requires that a result of the calculation, a calculated distance, be produced. Such a calculation is simply not made in Smith. Moreover, the second contention of the Examiner is not understood. There is no requirement that the claims "teach how the distance is determined." The claims specifically provide that a distance is calculated, that the calculated distance is compared with a stored distance, and that a decision is made on the comparison between the calculated distance and the stored distance. This is all that is required, and, in this regard, the clear language of the claims defines over the references.

Turning to the dependent claims, these claims are patentable for at least the reasons set forth above in support of the claims parent thereto. Moreover, a number of these claims set forth separately patentable features not disclosed by the references. For example, applicant disagrees with the contention by the Examiner that the subject matter of claims 20 and 21 is taught, by or obvious from, the teachings of either of the references.

Allowance of the application in its present form is respectfully solicited.

END REMARKS

ATTACHMENT B
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) An anti-theft system for vehicles, said system comprising:

a first electronic control device, adapted to be mounted in a vehicle to be protected, for controlling continued operation of the vehicle after the vehicle is started, said first control device including a ~~transmitter/receiver~~transmitter and receiver for, when the system is active, transmitting a characteristic signal; and

a second electronic control device adapted to be worn by a person authorized to use the vehicle and including a ~~transmitter/receiver~~transmitter and receiver for receiving said characteristic signal and for transmitting a return signal to the ~~transmitter/receiver~~transmitter and receiver of the first control device in response thereto;

said first electronic control device including a control circuit for determining the distance between the first and second control devices based on the returned signal and for disabling ~~vehicle~~said continued operation of the vehicle when said distance is greater than a predetermined distance, said second control device being of a size and an outward appearance similar to that of a conventional pager device.

2. (Original) An anti-theft system according to claim 1 wherein said control circuit includes a relay, including relay contacts connected in the electrical system of the vehicle, for, when energized, opening said contacts to open the vehicle electrical system.

3. (Original) An anti-theft system according to claim 2 wherein said electrical system includes an ignition circuit and wherein said relay contacts are connected in the ignition circuit to control disconnection of the ignition circuit.

4. (Original) An anti-theft system according to claim 2 wherein said electrical system includes fuel injector control circuit and wherein said relay contacts are

connected in said fuel injector control circuit so as to control operation of the vehicle fuel injectors.

5. (Original) An anti-theft system according to claim 2 wherein said electrical system includes a power supply circuit for the fuel supply system of the vehicle and wherein said relay contacts control opening of said power supply circuit.

6. (Withdrawn) An anti-theft system according to claim 1 wherein said second control device includes emergency shutoff means operable by the wearer of the second control device for, when activated, causing transmission of a cutoff signal to said first control device to effect cutoff of the vehicle operation.

7. (Withdrawn) An anti-theft system according to claim 1 wherein said second control device includes a battery-powered power supply having a predetermined operational lifetime and monitoring means for monitoring the hours of use of the power supply and for producing an alarm output when the hours of use approach said predetermined lifetime.

8. (Withdrawn) An anti-theft system according to claim 1 wherein said control circuit automatically resets the system to enable vehicle operation if the distance between the first control device on the vehicle and the second control device becomes less than said predetermined distance.

9. (Withdrawn) An anti-theft system according to claim 1 wherein said second control device includes control means operable by the wearer of the second control device for, when activated, disabling, after passage of a predetermined time period, the vehicle and all vehicle power options.

10. (Withdrawn) An anti-theft system according to claim 1 wherein said system includes an override function operable by the wearer of the second control device to enable operation of the vehicle when in park, the system providing for automatic

disabling of at least one vehicle function when the vehicle is taken out of park and the vehicle is more than said predetermined distance from the second control device.

11. (Withdrawn) An anti-theft system according to claim 1 wherein control circuit further includes control means, remotely operable by the wearer of the second control device, for disabling at least one further electrically controlled onboard device when the vehicle operation is disabled.

12. (Withdrawn) An anti-theft system according to claim 11 wherein said at least one onboard device comprises at least one of vehicle communication equipment, a siren, an onboard computer and an electrically operated gun rack.

13. (Withdrawn) An anti-theft system according to claim 1 wherein said control circuit includes control means, remotely operable by the wearer of the second control device, for enabling at least one electrically controlled onboard device when the vehicle operation is enabled.

14. (Withdrawn) An anti-theft system according to claim 13 wherein said at least one onboard device comprises at least one of emergency light bars, emergency signaling device, a camera system, and a recording device.

15. (Original) An anti-theft system according to claim 1 wherein said characteristic signal and said return signal both comprise radio signals.

16. (Canceled)

17. (Currently Amended) A system for preventing a vehicle protected by the system from being driven away by unauthorized persons, said system comprising:

a first electronic control device, adapted to be mounted in a vehicle to be protected, for controlling continued operation of the vehicle after the vehicle is started,

said first control device including a ~~transmitter/receiver~~transmitter and receiver for transmitting a characteristic radio frequency signal; and

a second electronic control device adapted to be worn by a person authorized to use the vehicle to be protected and including a ~~transmitter/receiver~~transmitter and receiver for receiving said characteristic signal and for, in response thereto, immediately transmitting a return radio frequency signal to the ~~transmitter/receiver~~transmitter and receiver of the first control device;

said first electronic control device including a control circuit for calculating the distance between the first and second control devices based on the returned signal to produce a calculated distance, for comparing the calculated distance with a predetermined distance and for disabling vehicle operation when said calculated distance is greater than said predetermined distance, said control circuit also disabling vehicle operation when a return signal is not received from said second control device.

18. (Original) A system according to claim 17 wherein said control circuit includes a relay, including relay contacts connected in the electrical system of the vehicle, for, when energized, opening said contacts to open the vehicle electrical system.

19. (Original) A system according to claim 18 wherein said electrical system includes an ignition circuit and wherein said relay contacts are connected in the ignition circuit to control disconnection of the ignition circuit.

20. (Original) A system according to claim 18 wherein said electrical system includes fuel injector control circuit and wherein said relay contacts are connected in said fuel injector control circuit so as to control operation of the vehicle fuel injectors.

21. (Original) A system according to claim 18 wherein said electrical system includes a power supply circuit for the fuel supply system of the vehicle and wherein said relay contacts control opening of said power supply circuit.